

ANNULAR PRESSURE RELIEF COLLAR

ABSTRACT

The present invention is an apparatus for relieving annular fluid pressure between nested casing strings. The invention includes a pressure relief collar formed of a cylindrical housing and a set of end connections disposed on opposite sides of the cylindrical housing. The end connections join adjacent sections of casing string of the same diameter. A plurality of equally spaced centralizer blades are secured to the outer surface of the cylindrical housing. Each centralizer blade is equipped with a pressure relief mechanism, which opens the passage of fluid from an outer annulus between adjacent casing strings to an inner annulus between different adjacent casing strings and also prevents backflow of fluid. One or more inlet and outlet filters may also be employed to remove solids and other contaminants from the fluid entering the pressure relief mechanism. The invention also has application as a pressure relief collar for eccentric casing strings.